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New R-Series SSI sensors deliver fastest, most accurate Temposonics® performance...

MTS INTRODUCES WORLD'S HIGHEST PERFORMANCE MAGNETOSTRICTIVE POSITION SENSOR

CARY, NC– (March 22, 2006) —Building on its next-generation Temposonics® design platform, MTS Sensors introduces the new R-Series Synchronous Serial encoder (SSI) Interface position sensor. The latest development in magnetostrictive position sensing combines design and manufacturing enhancements resulting in the world's fastest and most accurate magnetostrictive position sensor.

“For years, our products have been used in peripheral machine tool and CNC markets. Now, with our higher performance SSI capability, we can provide more customers in the machine tool and related industries with a reliable, lower-cost alternative to typical linear encoder scales,” said Temposonics Marketing Manager, David Edeal. “Using the new smart sensor product platform, we are able to provide this superior performance and capability set along with improved reliability and durability all in a smaller package with lower cost.”

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Synchronous Serial Encoder Interface

The R-Series SSI output sensor includes options for synchronized 7500 kHz update rates and position accuracy as low as +/-20 microns (+/-0.0008 inch.). MTS' proprietary synchronization technology guarantees the most accurate position output while minimizing inherent system-related delays to produce smooth, precise velocity loop control. An internal measurement error-checking routine ensures high immunity to shock and vibration (up to 15 grms / 10-2,000Hz and 100 g peak respectively). With its unique double-shielded design, the new R-Series product also includes the industry's highest EMC immunity level (IEC/EN 50082-2, IEC/EN 61000-4-2/3/4/6, level 3/4 criterion A). Like all R-Series model products, the SSI output product comes standard with an IP 67 housing (IP 68 with integral cable), as well as ATEX-approved explosion-proof and NEMA 4X optional housings.

Field Adjustability and Visual Diagnostics

The R-Series SSI sensor provides the same absolute serial encoder interface (Synchronous Serial Interface) widely used in the servocontrol industry. Design flexibility and field adjustability of data format, position resolution, and polarity and synchronization parameters are facilitated through the use of an easy-to-use PC interface programming software. This flexibility allows controls engineers to accommodate a range of controls interfaces and mechanical system variations within a common location, thereby helping to reduce sensor inventory.

In addition, the new sensor incorporates visual diagnostic LEDs, to minimize troubleshooting effort and downtime that might otherwise be associated with the sensor. For example, red and green LEDs indicate normal operation, magnet not detected, missing external interrogation signals or insufficient or out-of-range input power to name a few. Additional circuitry protection including polarity to 30 Vdc (all conductors) and over-voltage to 36 Vdc help to ensure sensor failure does not occur due to mis-wiring.

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Additional R-Series Capabilities

The Temposonics R-Series product family also includes current and voltage analog outputs, with an option for programmable dual position and/or velocity channels with a maximum velocity range of up to 10 m/sec. (40 in/sec.) and resolution as low as 0.1 mm/sec (0.004 in./sec.).

MTS R-Series CANbus and Profibus DP industrial network sensors are capable of sensing up to 15 magnet positions and five magnet velocities simultaneously along a single axis. This capability is used to eliminate the need for multiple linear or discrete sensors in applications where multiple tools or working elements are positioned along the same axis, thereby simplifying design efforts and reducing costs.

Housings and Electronics

All R-Series products can be ordered in three different application housings: RH, RP and RF. The Temposonics model RH rod-style sensors are designed for internal mounting in applications where high-pressure conditions exist (5,000 psi continuous/ 10,000 psi spike), such as hydraulic cylinders, and come in stroke lengths up to 7.6 m (300 inch.). With its unique electronics removable cartridge design, the model RH sensor offer users the ability to replace the sensing electronics in the field quickly and easily without the need to remove the sensor housing and break the high-pressure hydraulic seal.

Model RP “profile”-style sensors utilize a lightweight but stiff aluminum extrusion with sensing lengths of up to 5 m (200 inch.) and include two different magnet-mounting configurations: captive sliding magnet or floating magnet. The IP 67-rated RP-style sensors are used in applications where installation inside a hydraulic or pneumatic cylinder is not possible. They are well-suited for space-restrictive environments where there are high levels of dust and contamination. In addition, RP-style sensors can be externally mounted on machines via mounting brackets and configured with a variety of connector options.

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Model RF “Flex”-style sensors utilize a flexible, but also rugged, IP 65-rated sensing element. This design is also intended for sensing both linear and complex curvilinear motion with a minimum bend radius of eight inches. Model RF sensors are well-suited for a wide variety of custom externally mounted housing installations, but can also be used in long hydraulic cylinder applications or those with limited installation space. A major advantage of the RF design is that it can be produced in lengths as great as 10 m (400 inch.), but since it can be coiled for shipment, requires a crate envelope of only 1 m in diameter.

For more information on Temposonics R-Series Sensors, please contact: MTS Systems Corp, Sensors Division, 3001 Sheldon Drive, Cary, NC 27513. Phone: (919) 677-0100. E-mail: info@mtssensors.com or visit their web site at <http://www.mtssensors.com>.

MTS Systems Corporation is the world leader in magnetostrictive linear position sensing technology. MTS Systems Corporation is a global operation, with facilities in the U.S., Germany and Japan. In the U.S., the MTS Sensors Division has an ISO 9001 facility manufacturing rugged and reliable Temposonics position sensors as well as the highly repeatable and accurate Liquid-Level transmitters and gauges. With a strong commitment to research and development, product quality and customer service, the Sensors Division is constantly seeking ways to bring the highest value to customers.

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